
Capstone Two - Project Proposal

Project: NBA Player Performance vs Salary: Are Teams Getting Value for Money?

Problem Statement:

NBA teams spend hundreds of millions of dollars annually on player contracts, yet there is often debate about whether teams are getting a good return on their investments. This project will investigate the relationship between player performance and salary to determine how efficiently NBA teams are allocating their payroll. By identifying which players are underpaid or overpaid relative to their performance, this analysis can assist teams in making more data-driven financial decisions and identifying undervalued talent.

Business Use Case:

Team general managers and analysts need to balance team performance with strict salary caps. Knowing which players provide the most value can inform:

- Contract negotiations
- Free agent signings
- Draft pick decisions
- Salary cap management

Data Sources:

- [Basketball Reference - 2024 Player Stats](#): Includes player performance metrics such as points per game, rebounds, assists, efficiency ratings, and minutes played.
- [HoopsHype NBA Salaries](#): Includes current salary information by player.
- [Spotrac NBA Contracts](#): Contains detailed contract data including bonuses, incentives, and length of contract.

DSM Problem Identification Substeps:

1. **Objective:** Understand which players are most and least cost-effective by comparing their performance to their salary.
2. **Stakeholders:** NBA general managers, player agents, financial analysts, sports fans, and data-driven media outlets.
3. **Impact:** The insights can optimize team budgets, help smaller-market teams stay competitive, and create more transparency around player valuation.

Scope:

The dataset includes all active NBA players from the 2023-2024 season. Performance data and salary data will be merged on player names. Some limitations may arise from missing or inconsistent player name formats across sources, which will be addressed during data wrangling.

Initial Questions:

- Is there a strong correlation between total salary and total performance metrics?
- Which players are delivering the most "value per dollar"?
- Are certain positions or player archetypes consistently under- or over-valued?

Deliverables:

- Cleaned and merged dataset
- Visualizations comparing performance vs. salary
- A regression model estimating expected salary based on performance metrics
- Ranking of players by value index

Conclusion:

This project will offer a compelling look into the financial efficiency of NBA teams and has the potential to support more equitable and strategic player compensation models.